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MEDICAL SCHOOL, OSAKA UNIVERSITY

33 Joanchō, Kitaku, Osaka, Japan.

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Professor Joshua Lederberg

Department of Genetics  
Medical Center  
Stanford University  
Palo Alto, Calif.

Dear 常識-Sensei

Thank you very much for your letter to mention an interesting possibility, if R<sup>+</sup> bacteria may produce urease or citrase. Mr. Y. Sakamoto of my lab. has tested it following to your suggestion. Unfortunately it seems negative. The results obtained on that line are as follows:-

Bacteria:

W2654 (A. aerogenes)  
JM1 (Seratia macresence)  
JE131 (W3630 R<sub>100</sub><sup>+</sup>)  
JE177 ( " R<sub>100-1</sub><sup>+</sup>)  
JE218 ( " R<sub>100-27</sub><sup>+</sup>)  
W3630

Citrate, Urea plate test

citrate agar: Davis's agar - glu + citrate + B.T.B.

urea agar : Nutrient agar + 10% urea 0.5 ml + phenol red.

	177	218	131	JM1	W2654	W3630
U	+	+	+	++	++	*
C	-	-	-	+	+	-

Drug test

		1177	218	131	JM1	W2654	W3630
EMB	Tc 50 mmg/ml	+	-	+	±	-	-
	25	+	-	+	±	±	-
	Sm 100	±	-	+	-	-	-
	15	+	+	+	-	-	-
	Cm 25	+	+	+	-	-	-
DM	Su 50	+	+	+	-	++	-

Urease test (Quantitative test)

10 ml of those overnight culture of each bacteria were suspended in 4.5 ml of buffer, and the 2 ml was mixed with 10% Urea of 0.1 ml and tested by Conway's method.

0.1N H<sub>2</sub>SO<sub>4</sub> 2 ml was used in inner well

Time of incubation was 1 hr. at 37°C

10% NaOH 0.1 ml was added after the incubation, and reincubated at 37°C for 24 hrs. Then Nesler's reagent (0.3 ml) was added

Result

Hiroto

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Experiments using colicine for inducing mating between F<sup>-</sup> strains negative, though, many thanks for your suggestions.

I think you have recieved the translated exobiology paper. Please remain that both the readers and the translator are waiting the next interesting exobiology papers in here.

Very sincerely yours

*Yukinori Hirota*  
Yukinori Hirota

Results\*

Sample	1	2	3	4	5	6
10% Urea	0.1 ml	0.1 ml	-	0.1 ml	-	0.1 ml
Bact.	-	W2654	W2654	131	131	W3630
		2 ml	2 ml	2 ml	2 ml	2 ml
Buffer.	2 ml	-	-	-	-	-
570 m (adsorption)	3	14	10	10	10	9
-B.G.	-	11	7	7	7	6